What is claimed:

1. A pneumatic tire **(230)** having a tread **(232)**, a belt structure **(234)** and a carcass structure comprising a pair of sidewalls **(236a,236b)**, a pair of bead regions **(238a,238b)**, one or more plies **(242)** anchored in each bead region **(238a,238b)**, the tire being characterized by:

the pair of bead regions **(238a,238b)** each including an inextensible annular bead core **(244a,244b)** and an elastomeric torus **(246a,246b)** disposed laterally outwardly from and adjacent to each bead core **(244a,244b)** relative to the equatorial plane of the tire **(230)**; and

the carcass ply **(242)** having a pair of turnup ends **(242a,242b)** within the bead regions **(238a,238b)** that extend radially outward from the carcass ply **(242)** and under the bead cores **(244a,244b)** relative to the equatorial plane of the tire **(230)**, the turnup ends continue under an are turned up wrapping around the elastomeric toruses **(246a,246b)**, wrapping around the elastomeric toruses **(246a,246b)** with the locked end sections **(250a,250b)** of the carcass ply **(242)** located radially inward of the bead cores **(244a,244b)** and anchored between the bead cores **(244a,244b)** and the carcass plies **(242)**.

2. The tire **(230)** of claim 1 characterized in that the elastomeric toruses **(246a,246b)** are made of pre-cured rubber.

3. The tire **(230)** of claim 2 characterized in that the elastomeric toruses **(246a,246b)** are reinforced by fibers of matrerials including glass, Aramid, steel or polyester.

4. A method of forming a tire **(230)** on a tire building drum **(452)**, the bead cores **(244a,244b)** and the elastomeric toruses **(246a,246b)** are assembled, the method characterized by the steps of:

placing a carcass ply **(242)** on the drum **(452)**;

placing the pair of elastomeric toruses **(246a,246b)** over the carcass ply for their incorporation in the bead regions **(238a,238b)** of the tire;

folding turnup ends **(242a,242b)** of the carcass ply **(242)** back over the elastomeric toruses **(246a,246b)** so that anchored end sections **(250a,250b)** are disposed against the turnup ends **(242a,242b)**;

placing the bead cores **(244a,244b)** inward of and adjacent to the enfolded elastomeric torus **(246a,246b)** relative to the center of the building drum **(452)**;

expanding the center section **(452c)** of the building drum **(452)** to secure the bead cores **(244a,244b)** in place; and

inflating the carcass to form the tire.

5. The process of claim 4 including the step of providing the tire building drum **(452)** with grooves **(454a,454b)** to receive the toruses **(246a,246b)**.

6. The process of claim 5 where the center section **(452c)** of the building drum **(452)** is expanded after placing the bead cores **(244a,244b)** on the drum.